

METHODS OF FORMING MIM TYPE CAPACITOR STRUCTURES USING
LOW TEMPERATURE PLASMA PROCESSING

ABSTRACT

5 Methods of forming metal-insulator-metal type capacitors in integrated circuit memory devices can include crystallizing an HfO₂ dielectric layer on a lower electrode of a capacitor structure in a low temperature plasma treatment at a temperature in range between about 250 degrees Centigrade and about 450 degrees Centigrade. An upper electrode can be formed on the HfO₂ dielectric layer.

10